

To: Wagener, Christine[wagener.christine@epa.gov]
From: Margaret Watkins
Sent: Thur 5/28/2015 3:40:58 PM
Subject: Re: GP Swamp Lake Dissolved Organic Carbon and secchi depth
Swamp Lake Sulfate.xlsx

The context is that Ed Swain (MPCA) thought that lack of transparency would prevent wild rice from growing in a waterbody. Swamp Lake is the best wild rice water in Grand Portage, and it has very low transparency due to the heavy staining from organic carbon. So, the data was sent to the whole group at the request of MPCA. Our discussion and the request for sending the data did not have anything to do with sulfate concentrations.

However, sulfate levels are relatively low, too. Please find attached the sulfate concentrations for Swamp Lake. The yellow highlighted numbers (0.5) are half of that labs detection limit at the time the samples were collected indicating a non-detect.

I'm concerned that MPCA (and Ed Swain particularly) has made a whole lot of assumptions about wild rice without measuring the variable(s) of interest identified in their structural equation model against long-term experimental data. Validation of a model using the data that created the model is simply not good science and has been shown to provide erroneous results. And, the peer reviewers did not suggest that MPCA re-arrange the formula derived from SEM to create predicting criteria without validating the "exploratory statistical tool" results first.

On 5/28/2015 9:56 AM, Wagener, Christine wrote:

> Hi Margaret,
 > Can you provide some context for me? What are your sulfate values?
 >
 > -----Original Message-----
 > From: Margaret Watkins [mailto:mwatkins@grandportage.com]
 > Sent: Thursday, May 28, 2015 9:49 AM

Ex. 6 - Personal Privacy

> Subject: GP Swamp Lake Dissolved Organic Carbon and secchi depth

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> All:

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> As per our wild rice technical call yesterday please find attached both secchi depth measurements and dissolved organic carbon (DOC) concentrations for Swamp Lake in Grand Portage. We didn't begin collecting samples for DOC analysis until 2006. We have only one measurement of color for Swamp

Lake from 2010. Water color in the lake is described as a "dark root-beer"color.

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> Margaret

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